1. What is a primary key in a table?

A unique column that identifies each row, with no duplicates and no null or blank rows

2. Name the two types of table relationships in Power BI.

Many-to-many

One to many

And there are Many-to-One

3. How do you create a relationship between two tables in Power BI?

Go to Model view, by selecting and dragging a column from one table to another one

4. What is a "star schema"?

I think it's one central (main) table connects (links) to dimension tables

5. Which table is typically the fact table in a sales dataset?

Orders, Quantites, Prices (maybe)

6. Link Sales.csv to Customers.csv using CustomerID (one-to-many).

CustomerID from Customers table is 'one' side, link to CustomerID in Sales table as 'many' side

7. Why is ProductID in Sales.csv a foreign key?

Because it is linked (refers) to a Product table in order to link the data or can say fetch details from that table

8. Fix a relationship error where ProductID has mismatched data types.

It can be fixed by coverting both colums into the same type

9. Explain why a star schema improves performance.

It simplifies queries, speeds up vusials, and reduces joins

10. Add a new column TotalSales in Sales (Quantity * Price from Products).

TotalSales = Sales[Quantity] * RELATED(Products[Price])

11. Optimize a model with circular relationships—how would you resolve it?

12. Create a role-playing dimension for OrderDate and ShipDate.

It can be done by duplicating Dates tables. And linking oen to ShipDate and other to OrderDate column

13. Handle a many-to-many relationship between Customers and Products.

It can be done by creating bridge table and connecting both tables to that one

14. Use bidirectional filtering sparingly—when is it appropriate?

When the tables need to filter each other and when they don't create loops

15. Write DAX to enforce referential integrity if a CustomerID is deleted.

Sales

OrderID	CustomerID	ProductID	Quantity	OrderDate
1001	101	1	2	1/5/2023
1002	102	2	5	1/10/2023
1003	101	3	1	1/15/2023

Products

ProductID	ProductName	Category	Price
1	Laptop	Electronics	1200
2	Mouse	Accessories	25
3	Keyboard	Accessories	80

Customer

CustomerID	Name	Region
101	Alice	North
102	Bob	South
103	Charlie	East